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BOOK REVIEW

# Bert Hölldobler, Christina L. Kwapich, *The Guest of Ants – How Myrmecophiles interact with their hosts*

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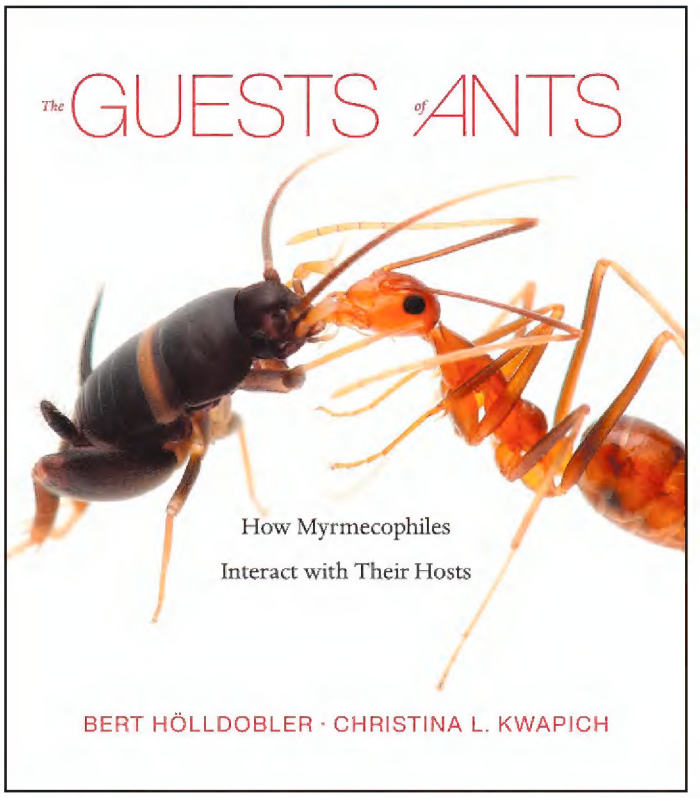
## Keywords

ants, myrmecophiles, interaction, ecology.




Hölldobler B, Kwapich CL (2022) The Guests of Ants: How Myrmecophiles Interact with Their Hosts. Belknap Press (Harvard University Press imprint), 559 pp.

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*The Guests of Ants* was written by two famous myrmecologist Christina Kwapich and Bert Hölldobler. The latter requires no presentation, being one of the greatest myrmecologists, also a pioneer in ant popularization, which started more than 30 years ago, with the book "The ants" alongside E.O. Wilson (1990). This fantastic collaboration between an experienced and an eager myrmecologist with a comprehensive background in myrmecophiles yielded in a comprehensive work.

*The Guests of Ants* is divided into ten chapters which are rather different topics concerning myrmecophiles. The first topic is about ants as a superorganism, with emphasis on ant mating, division of labor and parasites. The second topic is related to mutualistic symbionts, internal and external parasites which affect ants' behavior. The third chapter goes into detail on the nestmate recognition, the famous cuticular hydrocarbons and the pathways of nest intrusion. After these general aspects on ant ecology and behavior, parasites, the book focuses on several case studies. The fourth topic is dedicated to butterflies belonging to the Lycaenidae family. This topic focuses on *Phengaris* sp species interaction with ants, but of course other lycaenid species are taken into analysis. Also, the topic gives insights on miletine predators, tripartite symbiosis, and indirect parasitism. The fifth topic is related to foraging paths, ant trails and different dipteran species belonging to Milichiidae and Calliphoridae which adapted their strategies in intrusion of ant nest by using ant trails. The sixth topic is about spiders and other mimics pretenders and predators with several case studies. Probably one of the most interesting topics is being revealed in the seventh topic, namely The Mysteries of Myrmechophilous crickets. The topic gives intriguing insights on the odor mimicry, specialized mouthparts, phenotopic plasticity and cryptic speciation. The eight topic goes into some general classification of the myrmecophilous grades with several interesting case studies such *Pella humeralis, Dinarda, Lemuchusa,* Dracula beetles, and other examples. The nineth topic is also general and deals with myrmecophiles in the Ecosystem of Ant nests, with a particular focus on army ants, wood ants and the harvester ant, *Pogonomyrmex badius*. Moreover, the topic goes further on the networks and colony-level census and the infestation by myrmecophilous parasites and colony traits. The last topic is different from the others, due to the connection between ants and vertebrates, with interesting case studies from fish, amphibians, reptiles, and birds. The book is followed by an epilogue, a rich glossary, and a very comprehensive reference list (45 pages of literature).

The book is a must for myrmecologists and entomologists, but it extends to all biologists with an interest in social insects and insect ecology. The work is detailed but also not very technical. Yet, for the technical part there is a 14-page glossary which may help amateurs or non-professional readers.

## References

Hölldobler B, Wilson EO (1990) The ants. Harvard University Press.